

CLAIM AMENDMENTS

1. (Currently Amended) A porous particulate composition comprising a matrix of one or more catalytic components and at least one polymer [[olefin-based material]] having a plurality of free olefin groups, wherein the catalyst component is an organometallic complex selected from the group consisting of Group 3-10 metals, non-metals, lanthanide metals, actinide metals and combinations thereof; and wherein the matrix is formed by reaction of the catalytic component and the free olefin groups of the polymer [[olefin-based material]].
2. (Currently Amended) The composition of claim 1, wherein the polymer having a plurality of free olefin groups [[olefin-based material]] is a macroporous polymer prepared in the presence of a porogen and is selected from the group consisting of divinylbenzene polymers, divinylbenzene copolymers, styrene/divinylbenzene copolymers, divinylbenzene resins, cross-linked divinylbenzene polymers, styrene/butadiene copolymers, styrene/isoprene copolymers, vinylsiloxane polymers, alkylsiloxane polymers, allylsiloxane polymers, condensation products of siloxane polymers having a plurality of olefin groups and combinations thereof [[; and wherein the free olefin groups are optionally disposed on the surface of the olefin-based material]].
3. (Currently Amended) The composition of claim 1, wherein the average pore diameter of the polymer having a plurality of free olefin groups is 100 Å or greater and the polymer comprises at least 0.01 mmol/g residual olefin groups [[olefin based material is prepared by incorporating a plurality of free olefin groups into a solid selected from the group consisting of silica, silica polymorphs, alumina, alumina polymorphs, magnesia, magnesia polymorphs, siloxanes, alumoxanes, alkylalumoxanes, alkylsiloxanes, aluminosilicates, clays, zeolites and combinations thereof; the olefin-based material optionally having the free olefin groups disposed on the surface of the solid]].
4. (Currently Amended) The composition of claim 1, wherein the [[catalytic component is selected from the group consisting of olefin polymerization catalysts,

Ziegler-Natta catalysts, metallocene complexes of Group 3-10 metals, metallocene complexes of non-metals, metallocene complexes of lanthanide metals, metallocene complexes of actinide metals, single-site catalysts, single-site metallocene catalysts, and combinations thereof; and wherein the]] matrix further comprises [[a plurality of]] one or more olefin polymerization catalyst[[ic]] components selected from the group consisting of: Ziegler-Natta catalysts, metallocene complexes of Group 3-10 metals, metallocene complexes of non-metals, metallocene complexes of lanthanide metals, metallocene complexes of actinide metals, single-site catalysts, single-site metallocene catalysts and combinations thereof [[:]], at least one activator component and is used for polymerizing at least one olefin monomer selected from the group consisting of unbranched aliphatic olefins having from 2 to 12 carbon atoms, branched aliphatic olefins having from 4 to 12 carbon atoms, unbranched and branched aliphatic α -olefins having from 2 to 12 carbon atoms, conjugated olefins having 4 to 12 carbon atoms, aromatic olefins having from 8 to 20 carbons, unbranched and branched cycloolefins having 3 to 12 carbon atoms, unbranched and branched acetylenes having 2 to 12 carbon atoms, and combinations thereof.

5. (Currently Amended) The composition of claim 1, wherein the matrix is selected from the group of [[represented by a]] formulas consisting of: $[\text{Cp}^1\text{Cp}^2\text{MR}_x\text{L}]^+ [\text{NCA}]^-$, wherein M is a Group 4 metal, Cp^1 is a substituted or non-substituted cyclopentadienyl ring and Cp^2 is the same or different, substituted or non-substituted cyclopentadienyl ring and may be bridged symmetrically or asymmetrically to Cp^1 , R is hydride, alkyl, silyl, germyl or an aryl group, x is an integer equal to 0 or 1, L is formed by reaction of the Group 4 metal complex and the free olefin groups of the polymer [[an olefin-based material]] and NCA is a non-coordinating anion; [[or the matrix is represented by a formula]] $[\text{Cp}^1\text{Cp}^2\text{MR}]^+ [\text{NCA}]^-$, wherein M is a Group 4 metal, Cp^1 is a substituted or non-substituted cyclopentadienyl ring and Cp^2 is the same or different, substituted or non-substituted cyclopentadienyl ring and may be bridged symmetrically or asymmetrically to Cp^1 , R is a hydrocarbyl group formed by reaction of the Group 4 metal complex and the free olefin groups of the polymer [[derived from the hydrozirconation of an olefin-based

material]] and NCA is a non-coordinating anion; [[or the matrix is represented by a formula]] $[\text{Cp}^1\text{MR}_x\text{L}]^+ [\text{NCA}]^-$, wherein M is a Group 4 or 6 metal, Cp^1 is a substituted or non-substituted cyclopentadienyl ring, R is a hydride, alkyl, silyl, germyl or an aryl group, x is an integer ranging from 0 to 6, L is formed by reaction of the Group 4 or 6 metal complex and the free olefin groups of the polymer [[an olefin-based material]] and NCA is a non-coordinating anion; [[or the matrix is represented by a formula]] $[(\text{Multidentate})\text{MR}_x\text{L}]^+ [\text{NCA}]^-$, wherein M is a Group 4 or 6 or 8 or 9 or 10 metal, R is hydride, alkyl, silyl, germyl, aryl, halide or alkoxide group, x is an integer equal to 0, 1 or 2, multidentate is a bidentate, tridentate or tetradentate ligand containing nitrogen, sulfur, phosphorus and/or oxygen as coordinating atoms to the metal, L is formed by reaction of the Group 4 or 6 or 8 or 9 or 10 metal complex and the free olefin groups of the polymer [[an olefin-based material]] and NCA is a non-coordinating anion; [[or the matrix is represented by a formula]] $(\text{Multidentate})\text{MR}_x\text{L}$, wherein M is a Group 4 or 6 or 8 or 9 or 10 metal, R is hydride, alkyl, silyl, germyl, aryl, halide or alkoxide group, x is an integer equal to 0, 1 or 2, multidentate is a bidentate, tridentate or tetradentate ligand containing nitrogen, sulfur, phosphorus and/or oxygen as coordinating atoms to the metal and L is formed by reaction of the Group 4 or 6 or 8 or 9 or 10 metal complex and the free olefin groups of the polymer [[an olefin-based material]]; [[or the matrix is represented by a formula]] $(\text{Cp}^1)_x(\text{Cp}^2)_y\text{MR}_x\text{L}^+ [\text{NCA}]^-$, wherein M is a lanthanide or an actinide metal, R is hydride, alkyl, silyl, germyl, aryl, halide, alkoxide, amide or solvent ligand, R may also be a bidentate ligand containing nitrogen, sulfur, phosphorus and/or oxygen, x = 0-2, y = 0-2, L is formed by reaction of the lanthanide or actinide metal complex and the free olefin groups of the polymer [[an olefin-based material]] and NCA is a non-coordinating anion and combinations thereof.

6. (Currently Amended): The composition of claim 1, wherein the matrix is prepared from one or more polymers [[olefin-based materials]] having a particle [[diameters]] size ranging from 5 nm to 1000 μm .

7. (Withdrawn)

8. (Withdrawn)

9. (Withdrawn)

10. (Withdrawn)

11. (Withdrawn)

12. (Withdrawn)

13. (Withdrawn)

14. (Withdrawn)

15. (Withdrawn)

16. (Withdrawn)

17. (Withdrawn)

18. (Withdrawn)

19. (Withdrawn)

20. (Withdrawn)

21. (New) A porous particulate composition comprising a matrix of at least one macroporous polymer having a plurality of free olefin groups selected from the group consisting of: divinylbenzene polymers, divinylbenzene copolymers,

styrene/divinylbenzene copolymers, divinylbenzene resins, cross-linked divinylbenzene polymers, styrene/butadiene copolymers, styrene/isoprene copolymers, vinylsiloxane polymers, alkylsiloxane polymers, allylsiloxane polymers and combinations thereof; and at least one Ziegler-Natta catalyst, wherein the matrix is formed by reaction of the at least one Ziegler-Natta catalyst and the free olefin groups of the polymer.

22. (New) The porous particulate composition according to claim 21, wherein the Ziegler-Natta catalyst comprises at least one titanium compound, at least one magnesium compound and at least one aluminum compound.

23. (New) A porous particulate composition comprising a matrix of at least one macroporous polymer having a plurality of free olefin groups selected from the group consisting of: divinylbenzene polymers, divinylbenzene copolymers, styrene/divinylbenzene copolymers, divinylbenzene resins, cross-linked divinylbenzene polymers, styrene/butadiene copolymers, styrene/isoprene copolymers, vinylsiloxane polymers, alkylsiloxane polymers, allylsiloxane polymers, and combinations thereof; and at least one catalyst further comprising at least one chromium compound and at least one silicon compound, wherein the matrix is formed by reaction of the at least one catalyst and the free olefin groups of the polymer.